COTTON CHATS

DRAPER CORPORATION
HOPEDALE, MASSACHUSETTS

COTTON CHATS

TRADE-MARK REG. U.S. PAT. OFF.
AND IN CANADA

DRAPER CORPORATION

HOPEDALE MASS.

No. 260. MAY, 1925.

EBEN DRAPER BANCROFT

EBEN DRAPER BANCROFT

The death on April 6 of Eben Draper Bancroft, vice president and director of the Draper Corporation, closed a notable connection of 61 years with the corporation and its predecessors. Entering the employ of E. D. & G. Draper in 1864, he took charge of the accounts. A little later, as head of the office, he carried on the larger part of the correspondence of Geo. Draper & Sons, selling agents for the several Hopedale industries, up to the time of their consolidation in the Draper Company in 1896, when he became Purchasing Agent.

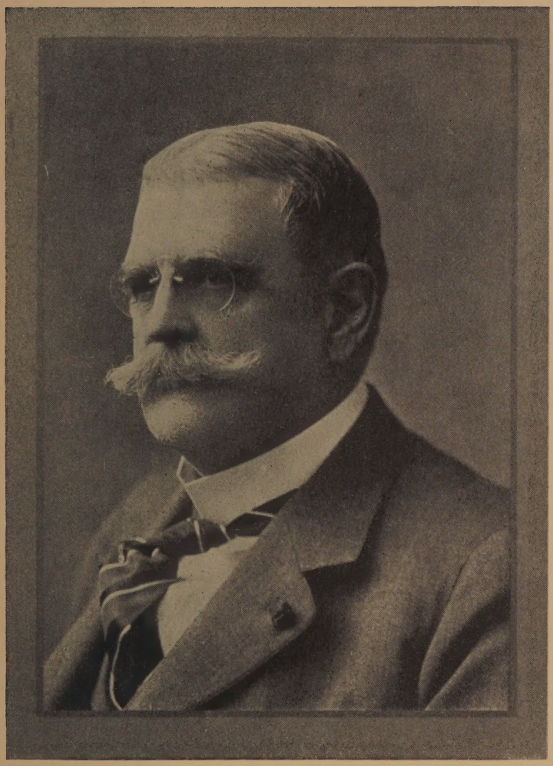
Handling the correspondence of a growing business in the '70's and '80's was quite different from similar work in these days of the typewriter. Mr. Bancroft was an expert penman, and his letters of those days are occasionally recalled by older mill men as almost perfect examples of penmanship.

This correspondence made Mr. Bancroft's name familiar to mill managers of an older generation. With his assumption of the duties of purchasing agent, he was no longer in close touch with those who use our machines, but acquired a large acquaintance with those who produce and sell the raw materials required in our plant. He retired as purchasing agent five years ago, but remained as vice president and director of the corporation.

Throughout his long connection with our business Mr. Bancroft's service was distinguished by exacting faithfulness to every trust and loyalty to his associates.

Mr. Bancroft was a native of Hopedale, the eldest son of Joseph B. Bancroft, one of the pioneers of the Hopedale industries and second president of the Draper Company. He was of early New England ancestry, John and Jane Bancroft having settled in Salem in 1632.

Mr. Bancroft was deeply interested in and responsive to any call to service for his native town. He was Town



EBEN DRAPER BANCROFT

Treasurer from the incorporation of Hopedale in 1886 and Treasurer of the Unitarian parish for 45 years.

Besides his Hopedale interests, he was at times an officer or director of several manufacturing companies, was director of the Massachusetts Trust Co. of Boston from its inception and director of the Milford National Bank.

He was a Mason and served as Commander of Milford Commandery, K. T., in 1886-8.

He was an active worker in the Republican party for many years, though not himself an aspirant for political office.

COTTON CHATS

TRADE-MARK REG. U.S. PAT. OFF. AND IN CANADA

DRAPER CORPORATION

HOPEDALE MASS.

No. 261. JUNE, 1925.

IMPORTED ENGLISH BROADCLOTH SHIRTING

The salesman for a maker of custom shirts called on us the other day. He handles only "the highest quality imported English" shirtings.

After showing his regular card samples, he handed us his prize sample of quality goods—a yard of English broadcloth.

Quality it had in raw material, in preparation and spinning of yarns; but to his surprise we pointed out a mark in the cloth showing every place where the shuttle had been changed in weaving. This mark, peculiar to a filling change by hand on a non-automatic loom, marred the beauty of the broadcloth.

We had at hand and were pleased to show him a piece of American broadcloth made on the Northrop loom. Not a mark of this kind showed.

We suggested that he get a few samples of "made in America" broadcloth woven on Northrop looms with a Feeler to match the pick.

We have examined samples of broadcloth made by different American mills on Northrop looms and have found

them superior in feel, texture and appearance to the English importations and with fewer weaving defects. We congratulate the manufacturers and are glad to bear testimony to the excellence of a home product.

CRAFTSMANSHIP AND POOR TOOLS

In the early days of the automatic loom the new machine was largely regarded as a device for increasing production and reducing labor costs on coarse goods.

That is just what it was. The Northrop loom went through its early stages of development as a print cloth loom. The passing years have seen a great advance.

Today Northrop loom products are outselling common loom products—on quality.

Better cloth can be made on Northrop looms than on any common loom.

Manufacturers have proved it. Some of them did not succeed on their first efforts. Help used to one kind of machine for years cannot change without learning how to use the new tool. Study and experience bring results.

Making fine fabrics calls for constant watchfulness to prevent defects of manufacture. They are a machine product in spite of all the skill and craftsmanship of the weaver. No true craftsman was ever helped by being compelled to use a poor tool.

The perfected Northrop loom relieves the weaver of much of the drudgery of preventing defects of manufacture and gives results not possible where the skill of the weaver is depended upon without the assistance of its automatic aids to the making of good cloth.

What we have said about English and American broadcloth shirtings is true of many high grade cotton fabrics. American automatic machinery and the increasing skill of American craftsmen in taking advantage of its possibilities are together responsible for these new quality products.

A FEELER OR HAND CHANGE OF SHUTTLES

When filling is replenished by a Feeler on Northrop looms there should be no partial picks or thick and thin places. The last pick before the change is a complete pick. The new bobbin is placed in the shuttle between picks, while the shuttle is out of the shed. The first pick laid from the new bobbin is a complete pick. The weave is complete without defect.

These conditions are possible where the change in filling is made by hand. That they are seldom attained is proved by the cloth made on common looms.

Hand control of power machines cannot compete with automatic control in freedom from manufacturing defects.

NEW DROP WIRES THAT ARE QUICK AND SURE IN ACTION

Quick drop.

Do you know anything that would improve your Warp Stop Motion any more than a Drop Wire with a "quick drop?"

If Drop Wires are rusty, if they gather moisture, if for any reason they develop an affinity for each other and one fails to drop quickly when the warp thread breaks, your Warp Stop Motion does not stop the loom promptly and poor cloth may be made.

For more than thirty years we have been at work improving our Stop Motions and Drop Wires.

We have invented ways of finishing Drop Wires so that they were delivered to you in condition to do all they were expected to do.

They were as smooth as mechanical skill could make them.

All burrs were removed by hand polishing of the thread eyes and slots.

They would not saw, scratch and tear your warps.

New wires worked as well as old ones that had been polished by use.

There seemed to be nothing more to be desired in a new Drop Wire as we delivered them to you.

But Drop Wires do not remain new. You must continue to use them after they are old.

Humidity is a weave room requisite.

Steel will gather moisture if there is any in the air. Moisture on steel brings rust.

Even a brand-new, highly polished Drop Wire loaded with moisture becomes sticky. A sticky Drop Wire will not act quickly. If the wires are crowded, it may not act at all.

Rust increases the tendency of the Drop Wire to stick to its neighbor and fail to drop. Rust also stains the warp.

We have been trying to take the stick and the rust out of our Drop Wires. Copper plating was an attempt in that direction. It helped, but did not prove adequate.

Now we have it.

The new Drop Wire we are now prepared to furnish and which we expect will entirely supersede the old wire on new orders is practically rustless.

It has very little tendency to gather moisture from the air.

Because its surface does not rust or gather moisture or lint or anything else that corrodes or roughens it, this Drop Wire does not stick to its neighbors when called upon to perform the duty that is its only reason for existence in your mill—to drop when the warp breaks.

Quick and sure are the proper adjectives to describe these new Drop Wires.

They cost no more than the old ones. They work better. They are good when they are new. They are good when they are old.

They mean better cloth.

COTTON CHATS

TRADE-MARK REG. U.S. PAT. OFF. AND IN CANADA

DRAPER CORPORATION

HOPEDALE MASS.

No. 262. JULY, 1925.

NORTHROP LOOM USED FOR WEAVING RAYON AND SILK

King Cotton may still be king. We have not heard of his abdication; we do not expect it. But the king's cabinet and courtiers, our textile manufacturers, see certain signs that urge a diplomatic rearrangement of policies.

Kings have had a hard time since the Kaiser went on a rampage and the rest of the world took part in the ensuing riot. The few thrones that remain hold kings with decreased power and authority.

King Cotton got caught in the riot, and his outlook for continued kingly sway rests on the fickle fancies of Dame Fashion and willful woman, who seem bent upon the coronation of Queen Silk.

In our homes we have toned down the shiny surface of our polished woods of former days to the soft, dull waxed surface and think we have achieved a more refined taste; but milady's choice in the line of bodily adornment is just now almost exclusively set on the sheen and soft texture of silk or its imitation, rayon, and mixtures of these with other fibres.

The practical man has learned not to fly in the face of milady's royal desires, but rather to cater to them and pocket the profits; so the textile manufacturer is here and there modifying his degree of loyalty to King Cotton and mending his financial outlook by giving some adherence to the new queen.

WEAVING RAYON

A phase of the growing demand for silky effects in fabrics has been the public response to a lot of new fabrics containing artificial silk, now officially known as rayon. Rayon and rayon mixtures with cotton may be woven on cotton looms to which some adjustments have been made. The needed changes have been worked out on the Northrop loom, and manufacturers find they can take advantage of the opportunity this affords them to enlarge or modify their line of products to meet present demands.

Rayon is manufactured in two forms. When made from wood pulp it is known as viscose. Celanese has a cotton fibre base. The latter will cross-dye. To obtain cross-dyed effects the former must be dyed in the skein.

Either form of rayon may be purchased from the manufacturer wound on through-tubes of various sizes. For any of these tubes we have special skewers so that the yarn may go directly to the weave room without rewinding. For the smaller tubes we have a specially designed steel skewer. For the large tubes we recommend a wooden skewer of new design which can be run in a shuttle of the size for the regular 8″ cotton bobbin. We make skewers for shuttles of any standard size.

If bought in the skein for dyeing or any other reason, the rayon may be wound on a regular cotton bobbin for weaving.

In all cases we recommend a bobbin or skewer shorter in relation to the shuttle than in cotton weaving. This is for the purpose of allowing room in the throat of the shuttle for a satisfactory friction lining to regulate the flow of the yarn to the eye. It also reduces the difference in drag on the yarn when weaving from the top to the bottom of the bobbin.

The best friction lining we have been able to find is made of muskrat skin with the filling drawing against the grain of the fur. Flannel and sheepskin do not give as satisfactory results.

We furnish a regular rayon shuttle with muskrat friction lining.

INTERMITTENT FEELER NECESSARY

Our new Intermittent Feeler is not only desirable, but absolutely necessary in the weaving of rayon. The repeated blows of any other Feeler will so affect the filling as to mar the beauty of the cloth both in the gray and after piece-dyeing. The damaged filling takes the dye differently.

For those who want to use rayon stripes in the warp we have developed loom appliances to fit their special needs.

SOME RAYON PROBLEMS

There are still some problems for those who would successfully weave the new fibre. They are peculiar to the fibre, however, rather than to methods and appliances for weaving. There is need of preventing excessive stretch and the absorption of too much moisture. The makers of rayon are busy with these questions and are confident that solutions have been found.

These are problems of the making of the yarn and its preparation for the loom. In the weave room the Northrop Loom is fully adapted and prepared to handle the new fibre.

WEAVING REAL SILK

Many silk mixtures are woven on Northrop looms. Tussah and one and two end Canton silk filling are being successfully used. We have a special skewer for the all-through tubes on which these silks are wound. We recommend a skewer of not over 6 3/4" in a shuttle of the size for a 7 3/8" cotton bobbin. If the silk is rewound on bobbins, the bobbin should not be over 6 1/2" in length.

The shuttle is fitted with glass or porcelain posts and lined with flannel, fur not being necessary.

Special shuttle boxes prevent wear of the shuttle.

The Intermittent Feeler is absolutely necessary.

RAYON THE THIRD FIBRE

The rayon industry is growing. Statistics recently published show that last year world production of rayon exceeded that of silk for the first time. In pounds used, it now ranks next to cotton and wool in the production of textile fabrics. What its future may be nobody knows, but five large American producers are preparing for increased output.

Meanwhile cotton manufacturers whose plants are equipped with Northrop looms may watch developments with complacency—perhaps with pleasure. They may feel certain that their mechanical equipment, with the addition of a few inexpensive appliances already perfected, will handle the new fibre; and there is the possibility that the new fabrics produced may help to restore textile prosperity.

COTTON CHATS
TRADE-MARK REG. U.S. PAT. OFF. AND IN CANADA
DRAPER CORPORATION
HOPEDALE MASS.

No. 263. JANUARY, 1926.

773 OR 24 FEELER BLOWS ON SAME STRANDS OF YARN?

Why the Intermittent Feeler?

Chiefly because a Feeler must engage the yarn on the bobbin hundreds of times before the yarn is woven off so that a fresh layer is presented for each new blow.

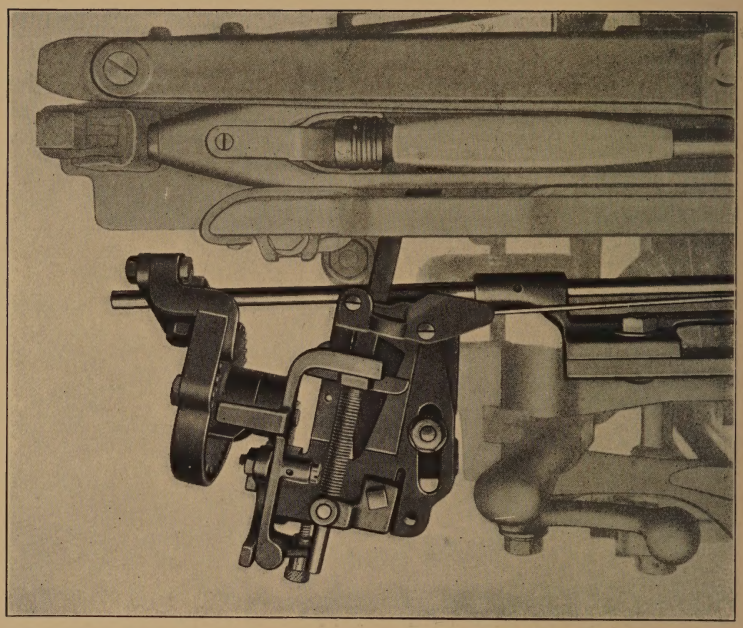
These hundreds of blows fall on the same identical strands of filling until from two-thirds to four-fifths of the yarn on the bobbin has been woven off. The longer the bobbin the greater the number before the change.

In a recent test a 6 3/4" bobbin received 1241 blows from Feelers of the common type. Of these blows, 773 fell upon the same strands of filling before the new yarn layer was presented.

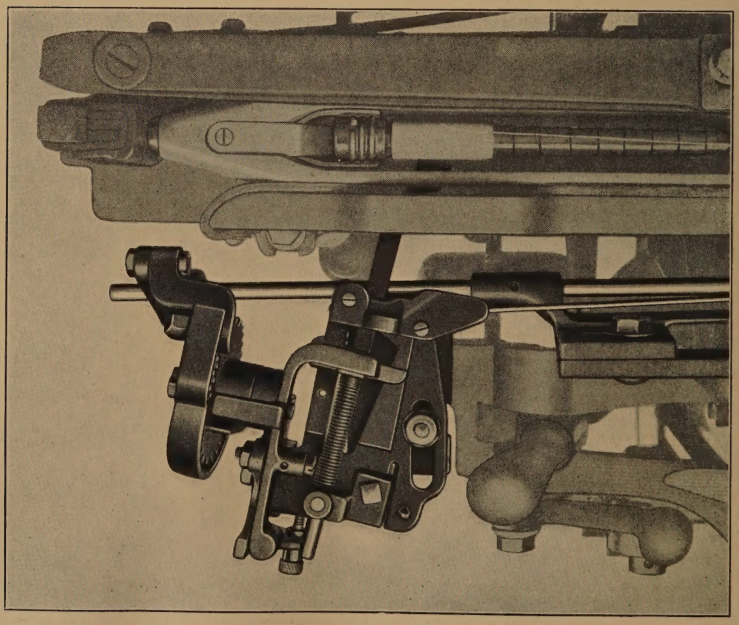
In the same tests the Intermittent Feeler engaged the filling 193 times; but only 24 of these contacts came before a new surface was presented for each blow, and only 34 before the Feeler began continuous operation.

773 to 24! All upon the same particular strands of yarn.

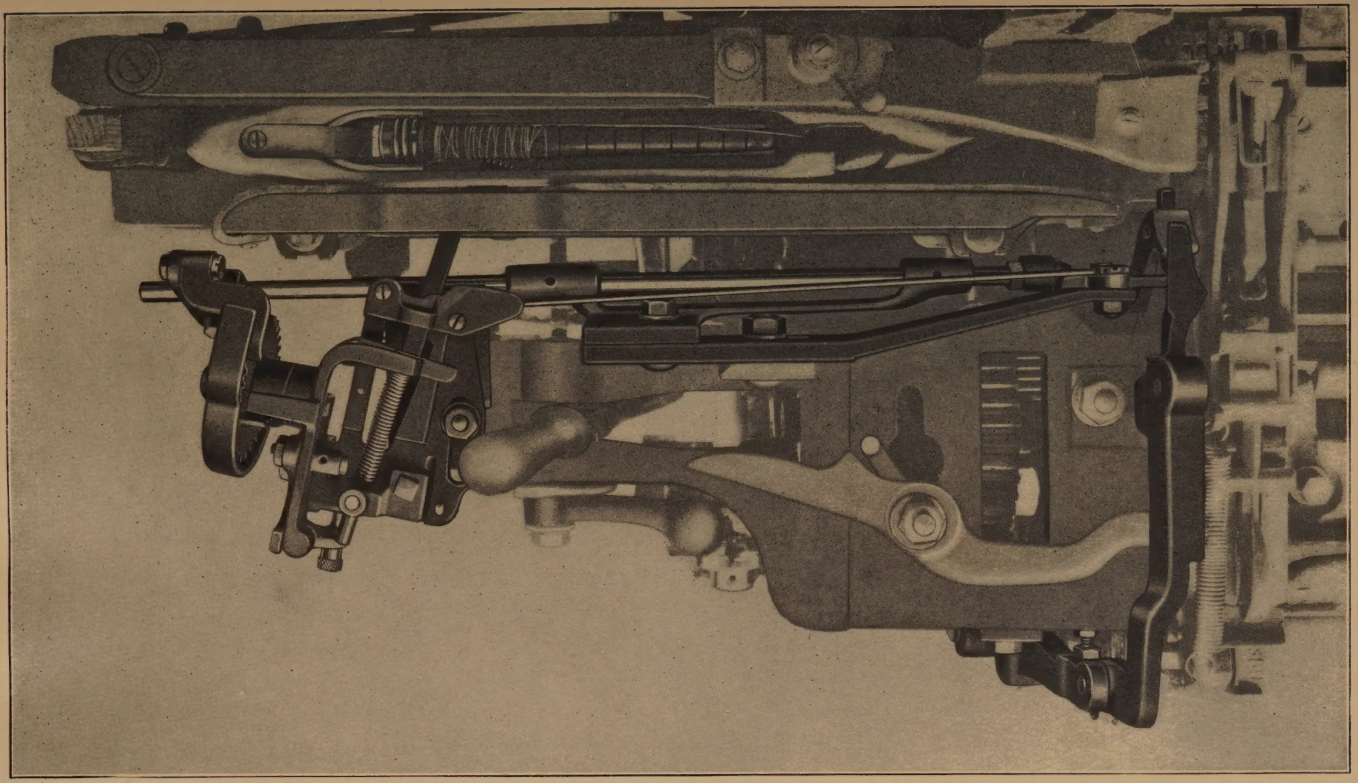
Think what these figures mean in your weave room results—in damaged yarn, in increased waste, in wear and tear on the Feeler mechanism,



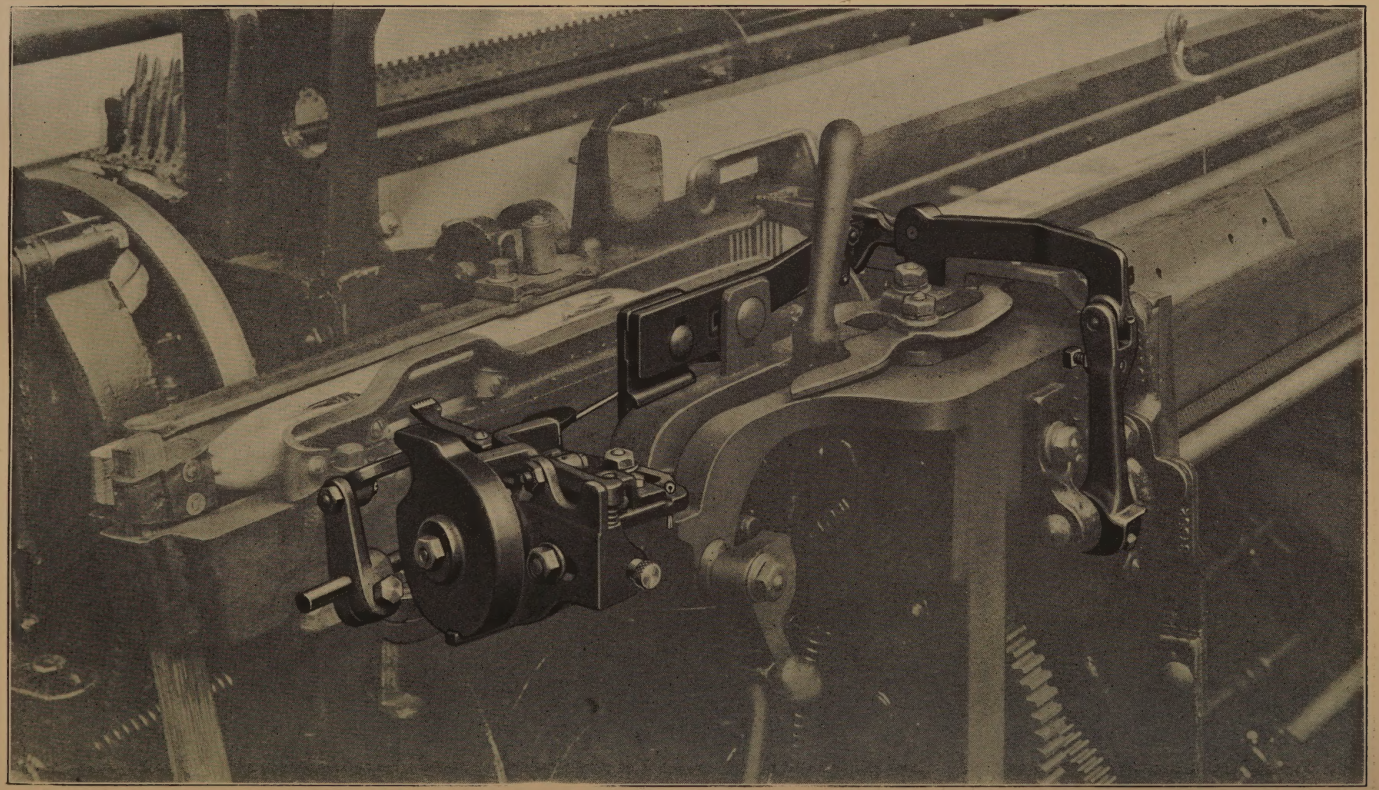
With Feeler Blade Locked Away from Full Bobbin



After a New Layer of Filling is Presented for Each Stroke



Feeler Blade Operating for Transfer of Bobbin



COTTON CHATS

TRADE-MARK REG. U.S. PAT. OFF. AND IN CANADA

DRAPER CORPORATION

HOPEDALE MASS.

No. 264. FEBRUARY, 1926.

WHY NOT MORE YARN ON YOUR FILLING BOBBINS?

More yarn on your filling bobbins!

And so evenly wound that practically every bobbin looks like its neighbor!

How would you like to be able to walk through your weave room and make that report on the bobbins in the hoppers of your Northrop looms?

Even a small increase of yarn on your bobbins means reduced costs. Ten or 20 percent or any other increase means less bobbins to buy and less to be handled, reduced cost of doffing in the spinning room, fewer bobbins to cart to and fro, less work in filling batteries, fewer filling changes, with better cloth on looms without feeler and less waste on looms where feelers are used.

Improvements in spinning, in bobbins and shuttles, and many of the refinements of the present day Northrop loom make larger bobbin packages quite possible. We are constantly changing looms, spindles and rings to effect this desirable increase in yarn capacity of the filling bobbin,

and our experts are at the service of all who desire to consider such changes. We have approved methods of making these changes, in most cases without affecting the floor space occupied by the looms. A change in length of bobbins or width of shuttles has increased the size of the yarn package all the way from 25% to nearly 100%, according to conditions at the mill where the change was made.

More yarn on the bobbin is also secured by reducing the number of bobbins only partly filled with yarn due to an uneven alignment of the bobbins on the spinning frame. If bobbins rest at different heights on the spindles, the amount of yarn on all the bobbins is reduced because of the necessary shorter traverse, or some of the resulting packages must be thrown out as useless. Either way there is waste, in increased expense of doffing in both spinning and weaving, or in yarn lost as waste.

The centrifugal clutch spindle was designed to secure a better alignment of the bobbins on the spindles.

The brass bushing in the butt of the bobbin was designed to the same end.

Both were outstanding improvements and accomplished much; but both fell short of complete success because neither affected the upper point at which the bobbin must fit the spindle. The longer the bobbin the more essential this upper point of fitting and the greater the loss in the yarn package when fit is lost from any of the common bobbin defects.

The bobbin with brass bushings in both butt and top is the complete solution.

Bobbins bushed in both butt and top always go to their proper seat on the spindle except when waste is present inside the bobbin; and this is quickly detected and removed.

Reaming is entirely eliminated.

Larger and more uniform yarn packages are secured.

For the use of any type of sliding Feeler this uniformity is essential, Minimum waste is assured only with a bunch of reserve yarn at the bottom of the yarn traverse on the bobbin—and this bunch must be as near the butt as possible and not vary in position. This fixed position can be assured only with bobbins with both top and bottom bushings.

THE PRICE IS LESS

With bobbins bushed at both points of contact with the spindle, more latitude is afforded in selecting the wood from which the bobbin is made.

Heretofore many of our customers have felt it was necessary to specify selected maple for their bobbins and have paid the higher price because the harder wood resists the action of humidity and its tendency to reduce the size of the hole through the bobbin.

Birch bobbins, fitted with top and bottom bushings, are entirely satisfactory from the standpoint of fit on the spindle, will warp less and keep straighter than maple. They will give better service because they are light, there is no reaming required and they will run true longer on the spindle than a bobbin that warps more easily.

We make maple bobbins with both bushings, with a bushing in the butt only and without any bushing, and shall continue to do so; but for the benefit of those who can realize its advantages, we confidently recommend a birch bobbin with top and bottom bushing.

There is another advantage in the birch bobbin. It costs less.

The bobbin with two bushings is proving so satisfactory, so desirable, it is sure to be generally ordered.

It would naturally call for a higher price.

But the birch bobbin with the two bushings can be sold for practically the price of the maple bobbin with a bushing in the butt of the bobbin only.

YOUR OPPORTUNITY

If your bobbins are not as long or your shuttles as large as your weave will allow, you are handicapped in the competition with mills that have reduced costs by new or changed equipment that secures them these advantages.

Our experts are at your service to advise about possible changes.

If you are suffering from any form of waste in product or increase of cost of production due to uneven yarn packages on your filling bobbins, you have a complete remedy in the bobbin with brass bushing in both top and bottom.

You may have them in maple.

If, however, you are not bound by tradition, you will test the proof of the value of our discovery that the double bushing opens the way to the use of a better and cheaper bobbin—one that you do not have to ream. The double bushing gives more yarn on the bobbin, more even yarn packages. The birch bobbin stays straight longer and is economical, both in first cost and in handling in your mill.

WARP BOBBINS

We are now prepared to furnish warp bobbins with one or both brass bushings. They may be made of maple or birch. Our suggestion is birch warp bobbins with brass bushings at top and bottom.

COTTON CHATS

TRADE-MARK REG. U.S. PAT. OFF. AND IN CANADA

DRAPER CORPORATION

HOPEDALE MASS.

No. 265. MARCH, 1926.

NEW WARP STOP MOTION WILL HANDLE ANY WEAVE

We have a new Warp Stop Motion.

It is not so new that it has not been thoroughly tested in practical service. If you have not seen it, you should know about the improvements that make it an outstanding advance over all previous stop motions.

We call it the No. 17 Sliding Bar Warp Stop Motion. That sounds like a climax of experience—and it is.

It is the 24th or 25th form of stop motion we have put out since we introduced the automatic loom. Each contributed something to the progress of the art of automatic weaving and its adaptation to an ever-increasing variety of cloths and mill conditions.

After 32 years of effort, No. 17 is a culmination. It is designed to meet every general and special condition any previous stop motion fitted and all short-comings of these that experience has demonstrated.

For instance;

You have had trouble from lint gathered on your stop motions. Proper operation of the parts was hindered or slugs carried into the cloth.

The No. 17 Sliding Bar Warp Stop Motion

No Underneath Bars to Catch and Hold Lint

A change to a higher sley called for extra banks of drop wires. The change cost money. It also usually entailed moving your beams back, thus disturbing weaving conditions and narrowing your alleys.

A weave with a complicated draw might have been more easily handled with a Drop Wire that could be dropped on the warp in the loom. You were restricted to the type with closed end.

Drop Wires have been "chewed-up" by the knock-off or by abuse by your weaver of the device for detecting the wire that was down.

You have wanted to use a lighter wire than was practicable.

Your weaver has lost time when the shuttle stopped in the wrong box.

Your loomfixer has had to reset the knock-off and cam after putting in a new warp.

Your weaver lost production while he was doing this.

To cure these and numerous minor defects of the old stop motions the No. 17 was designed. That is why it is the climax of experience.

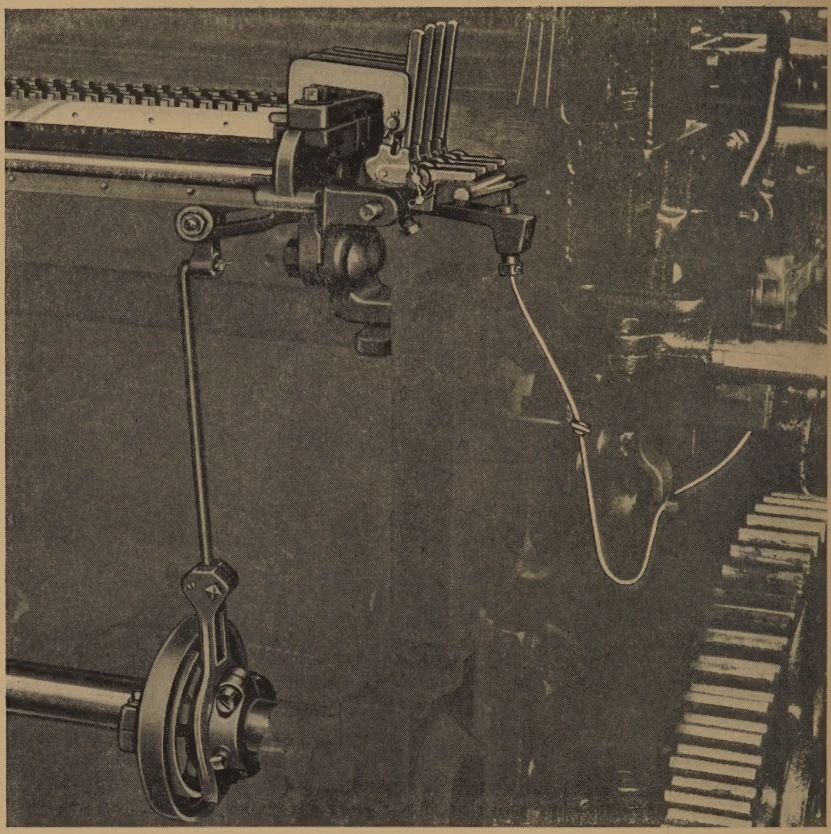
SIMPLE IN DESIGN

Our pictures give a good idea of the simplicity of design of the No. 17.

The basis of this simplicity is a three-ply Drop Wire Bar that carries the tripping mechanism of the stop motion. This bar occupies no more room than the old plain Drop Wire Bar and eliminates the moving serrated bars and levers underneath the old warp stop motions.

The new Drop Wire Bar is made up of two notched bars riveted together and held firmly in a fixed position and a third notched bar that slides back and forth from side to side in a groove between the other two.

When a thread breaks, the Drop Wire falls into one of the notches and stops the sidewise movement of the

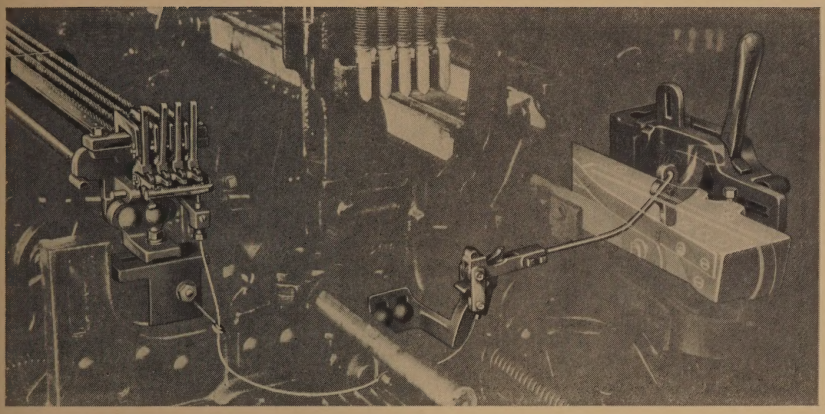


Operating Cam Takes Little Space on Cam Shaft

sliding bar. This causes pressure upon a wire plunger encased in a spring cover and raises a knock-off on the side of the loom into the path of a bunter upon the lay. With the proper form of brake, the loom is always stopped with the shuttle in the box opposite the battery.

The mechanism is driven by a single arm and rod connection with a path cam and follower on the cam shaft that take up little room on that shaft.

The tripping point has been transferred from the bottom of the wire to the top of the bar slot in the wire. Drop Wires cannot be jammed. One Drop Wire Box Plate has been succeeded by a polished rod. The stop motion



The Knock Off Parts

is open from top to bottom with nothing to catch lint, for all moving bars and levers on the underside have been removed.

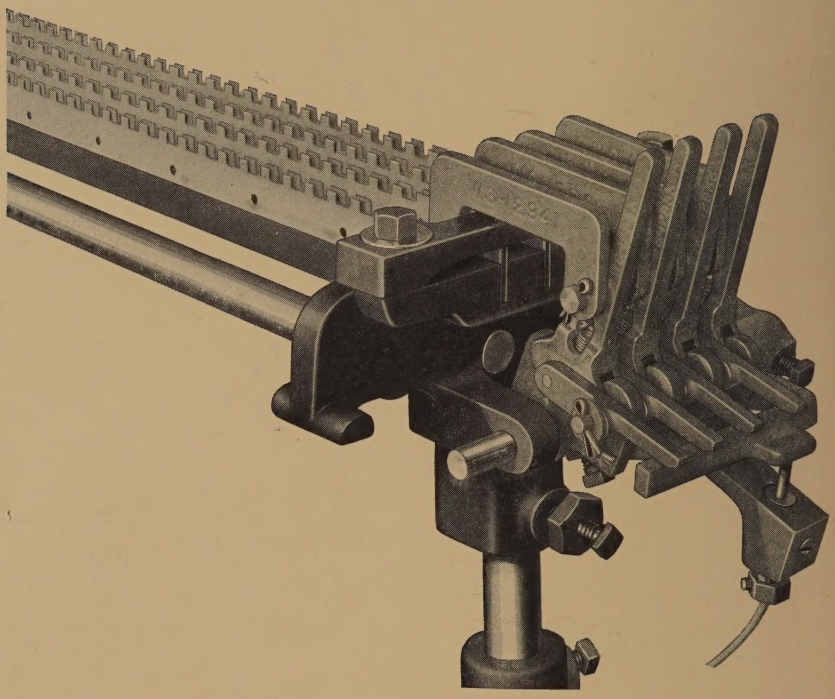
The knock-off device—the sliding bar that engages the wire, plunger connection and knock-off proper on the side of the loom—rarely gets out of order. It is quickly and easily reset.

MORE BANKS, MORE EFFICIENT

With the change in knock-off point from the bottom to the top of the Drop Wire and no part of the motion projecting below the bottom of the wires, it is possible to use more banks of drop wires without disturbing weaving conditions by moving the beam back. The No. 17 is regularly built with four banks.

With older styles, when three or four banks were needed to take care of a high sley weave, it was often necessary to move the beam back. The No. 17 seldom requires a change in beam position.

Four banks of wires will take care of any warp from the lightest to the heaviest sley without mechanical change. There is less crowding of the wires, less chafing of the yarn and a surer stop.



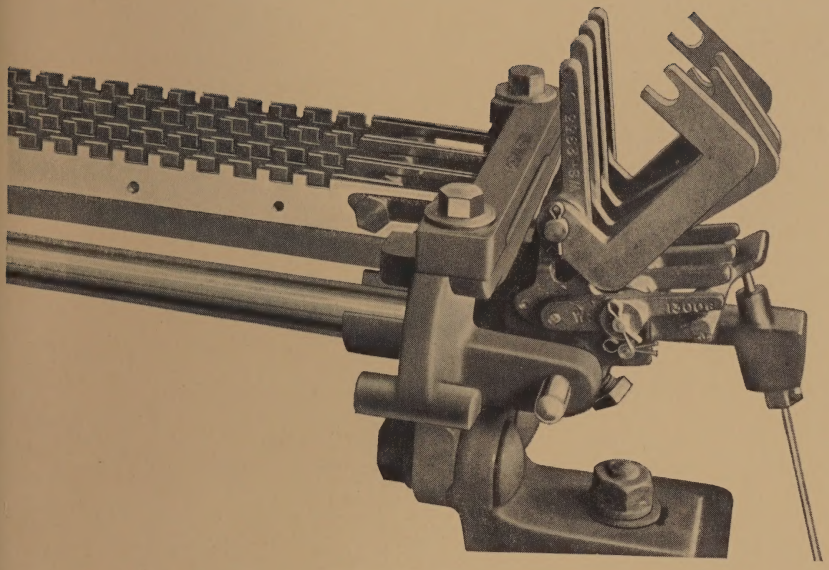
Lever Links in Place—All Bars Operating

EITHER CLOSED OR HAIRPIN DROP WIRE

The No. 17 will use either the closed type of Drop Wire, which requires drawing-in the warp by machine or hand, or the open-end or hairpin type dropped on after the warp is in the loom. The only change necessary is substitution of the desired wire. A special device facilitates application of wires of the hairpin style.

It will use a lighter Drop Wire than ever before possible. This lighter wire may be secured by the use of thinner steel or narrower strips, or by wider cutouts in stock of the common thickness and width.

An indicator shows the bank on which a wire is down. By means of this indicator, the weaver quickly detects the particular wire where the thread is out.



Lever Links Thrown Back Disconnecting All Moving Parts for Warp Change—Number of Links in Place Fixes Number of Banks of Wires Operated

The knock-off will not "chew-up" or otherwise damage drop wires, nor can the weaver do so by the use of the indicator in detecting the wire which is down.

NO MORE LINT GATHERING

The No. 17, with no parts at the bottom to gather lint, effects a complete elimination of lint-gathering troubles. When supplied with our new Rustless Drop Wires, made from a metal stock that does not attract moisture or gather lint, both wires and working parts remain free from any collection of lint, and there is an end to troubles from this source.

PUTTING IN WARP MADE EASY

When necessary to put a new warp in the loom, the lever links that move the sliding bars are thrown back. This disconnects the trip and all knock-off parts so that the latter do not interfere with operation of the loom while

putting the warp in and making ready. The removal of the Drop Wire Bars and their replacement with the warp is as simple as in any stop motion.

When the warp is adjusted and ready for weaving, the lever links are thrown back in place and the loom started. There are no cams or knock-off parts to reset or adjust.

The No. 17 Sliding Bar Warp Stop Motion with four banks of wires is standard construction for new Northrop looms of several models. We hope to have it soon for all models.

Many will want it for old looms.

It will adapt itself to any possible weave. There will be no more changing, for you will not be handicapped by coarse or fine goods, light or heavy sley. It will take care, without mechanical change, of anything the loom will weave.

It will not gather or hold lint.

It will use a Drop Wire of light or heavy stock and with open or closed end.

It will not "chew-up" Drop Wires.

Detecting the end down is direct and immediate.

Its knock-off mechanism is simple, has few working parts to wear and get out of order and it is so easy to set that loomfixers are amazed at its simplicity.

No part of this knock-off has to be reset after a warp change.

It is as universal as the Ford and runs as smoothly as the Rolls Royce.

It is the ultimate in Warp Stop Motions, unless some desirable feature of a Warp Stop Motion develops that had not been cataloged when the No. 17 was designed to meet every known demand of an ideal stop motion.